Abstract:

In Idaho, steelhead (*Oncorhynchus mykiss*) abundance in the Upper Salmon River basin (USRB) has declined due to anthropogenic disturbances. Historically, the Lemhi River watershed was one of the most important spawning areas for steelhead in the USRB. Due to their decline, recovery goals were set for the Lemhi River steelhead population. Therefore, it is important to monitor steelhead spawning to assess population status and how that relates to recovery goals in the Lemhi River watershed. However, monitoring adult spawning can be challenging due to the complex life history strategies of steelhead. Particularly when assessing the size of a redd and assigning it to a fish life history strategy. Therefore, the objective of this study was to evaluate the identification methods for steelhead and fluvial/resident Rainbow Trout redds. Multi-pass spawning ground surveys were conducted in six priority tributaries and a reach in the Lemhi River from April to May 2025. In the field, redds were enumerated and measured for length and width and were assigned as steelhead, resident, or fluvial Rainbow Trout. Redd data from the Lemhi River was compared to other studies in Idaho assessing redd size. Results from the study will improve data collection methods for spawning ground surveys and will allow managers to make more informed decisions on the status of steelhead in the Lemhi River watershed.